

(e) generating a 3D image from said image display surface.

71. (Amended) A system as in claim 48 used for image recording further comprising:

(e) a photosensitive plane on which an outer image to be recorded is produced, said outer image [presented] comprising a plurality of said blocks, each block being of a two dimensional array of pixels, and all said blocks comprising M pixels, where number M exceeds number N, and where said system components of (a), (b) and (c) are placed in the mentioned order of the light path of the complimentary screen; and

(f) means to scan said outer image on said photosensitive plane into electric signals for recording.

### REMARKS

This submission is in response to the Final Rejection dated January 15, 2002. Claims 48-50, 52, 55-61, 63, 65 and 67-74 are pending.

The Final Rejection is responded to by paragraph numbers.

Applicant's attorney respectfully thanks the Examiner for his efforts in analyzing the application.

A new set of formal drawings is submitted herewith. The objections

made by the Examiner are addressed.

2. Drawings of 11/16/01 - Fig. 5(b) has been labeled properly.

3. Drawings of 2/1/00 -

Figs. 4, 6 and 7 are submitted in formal form.

Figs. 1 and 5(a) are submitted in formal form. Fig. 5(b) also is submitted in final form.

Fig. 2 - a new Fig. 2 is submitted.

Fig. 3 - the curved line for the light conductor 3 has been made a straight line. Applicant notes that the Specification does call for the piezoelectric element 14 to be at the end of the deflector 14.

4. The amendment to page 23, lines 9-15 is re-submitted and the reference numeral 26 has been used for the laser (see Fig. 7) instead of the incorrect number 31.

5. In claim 48, line 4, the phrase "one or more pixels" is now used, as suggested by the Examiner. Therefore, the objections to claims 48-50, 52, 55, 56, 71 and 72 has been overcome.

6.&7. Claims 65, 72 and 74 are cancelled. Claim 70 (also see Paragraph 11. of the Office Action) stands rejected as not having support in the Specification for parts (e) "placing said P blocks . . ." and (f) "generating a 3D holographic image from said hologram". Applicant proposes to amend claim 70 to delete clause (e) and

amending clause (f) to be clause (e), and now stating that the 3D image is generated from the image display surface. Reference is made to page 23, lines 8-14 of the Specification.

8.&9. Claims 55, 56, 71 and 72 stand rejected based on an indefiniteness in part (f) in claim 71 of lack of antecedent for the phrase "said plane information". Claim 71 is proposed to be amended to make clause (f) consistent with clause (e), which recites the photosensitive plane.

10. The allowability of claims 57-61, 63, 67, 68, 69 and 73 is noted. Claims 48-50 and 52 should now be allowable since the objection to claim 48 has been overcome. Claims 71, 55 and 56 also should now be allowable since claim 71 has been amended to overcome the §112 rejection.

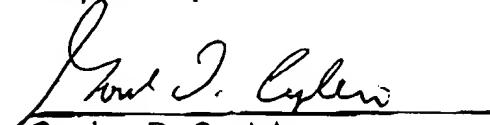
The amendment should be entered since it clearly places the application in condition for allowance.

In view of the above amendments and remarks, it is respectfully requested that the application be reconsidered and that all pending claims be allowed and the case passed to issue.

If there are any other issues remaining which the Examiner believes could be resolved through either a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned at the telephone number indicated below.

Prompt and favorable action is requested.

Respectfully submitted,



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**Response to Office Action dated January 15, 2002**  
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**MARK-UP OF SPECIFICATION FOR AMENDMENT  
PURSUANT TO 37 C.F.R. §1.121**

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Page 23, lines 9-15

Laser [31] 26 produces coherent light 27 and after diffraction on hologram plane 31, produces a three dimensional (3-D) image formed by diffracted light 32. The image may be viewed directly or projected onto a large screen by a projection system. The use of three lasers, one for each color component, allows formation in the same way of a 3-D color image. As a holographic image restoring light may be also used that produced by mercury vapor lamp.

**MARK-UP OF CLAIMS FOR AMENDMENT  
PURSUANT TO 37 C.F.R. §1.121**

Cancel claims 65, 72 and 74 without prejudice.

48. (Amended) An image display system comprising:

(a) at least one complimentary screen of one of light emitting or light source modulating devices in a two dimensional array of  $N$  (a real number) pixels, from which raster elements comprising one or more pixels are sequentially generated;

(b) a raster multiplying system comprising a plurality of light dividing elements, each said light dividing element to deflect a proportional part of a raster element of the complimentary screen as a light beam and transmit the rest of said beam to another light dividing element to simultaneously form copies of the generated raster elements, with said copies of said raster elements to be used in forming  $P$  blocks, each block comprising a two dimensional array of pixels;

(c) an array of controllable modulators to simultaneously and independently modulate each of the raster elements for each of said  $P$  blocks, each said modulator having an output to coincide with a block of the image; and

(d) a surface on which an image with a resolution of  $M$  pixels is

formed and displayed, comprised of said P blocks, where the number M exceeds the number N and where said components of (a), (b), (c), (d) are placed in the mentioned order of the light path of the complimentary screen.

70. (Amended) A method for forming a hologram generated as a 3D holographic image by simultaneous forming of P constituent blocks of said hologram on an image display surface, so that the hologram is presented as comprised of a plurality of P blocks, a block having a two dimensional array of pixels, comprising the steps of:

(a) providing a complimentary screen having a two dimensional array of N pixels from which a plurality of raster elements of one or more pixels are generated with one or more of said generated raster elements to form a block of a hologram;

(b) using a raster multiplying system comprising an array of at least partly light transmitting elements to separate a raster element corresponding one beam into a plurality of beam components to simultaneously form a plurality of copies of a said generated raster element, with said generated copies of said raster element forming P blocks each block comprising a two dimensional array of pixels;

(c) transmitting the formed beam components to an array of controllable modulators, to independently modulate the beam component corresponding to each raster element copy in accordance with control signals

applied for each of said P blocks;

(d) repeating the procedure successively generating other raster elements from said complimentary screen, to simultaneously form a modulated raster in each of said P blocks; and

[(e) placing said P blocks on an image display surface in the form of a hologram, said hologram having a resolution of M pixels, where M is greater than N; and]

[(f)][(e) generating a 3D [holographic] image from said [hologram] image display surface.

71. (Amended) A system as in claim 48 used for image recording further comprising:

(e) a photosensitive plane on which an outer image to be recorded is produced, said outer image [presented] comprising a plurality of said blocks, each block being of a two dimensional array of pixels, and all said blocks comprising M pixels, where number M exceeds number N, and where said system components of (a), (b) and (c) are placed in the mentioned order of the light path of the complimentary screen; and

(f) means to scan said outer image on said photosensitive plane [information] into electric signals for recording.